Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of:	)	
	)	
Wireless Telecommunications Bureau Seeks Comment on Wilson Electronics Petition for Rulemaking to Eliminate the Personal Use Restriction on Wideband Consumer Signal Boosters	)	WT Docket No. 10-4
	)	RM-11784
	)	
	)	

COMMENTS OF
THE NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL

The National Public Safety Telecommunications Council (NPSTC) submits these comments in response to the Commission's Public Notice in the above captioned proceeding.[1] NPSTC supports the Wilson Electronics request to eliminate the personal use restriction on consumer wideband signal boosters deployed to enhance commercial mobile radio system (CMRS) coverage in weak signal areas. As addressed in the comments herein, it is not apparent why a signal booster on a CMRS system would have a greater potential for interference when used for government or business use instead of for personal use. Adequate rules need to be in place to minimize potential interference regardless of the nature of the commercial system subscriber who deploys the signal booster.

[1] Public Notice: Wireless Telecommunications Bureau Seeks Comment on Wilson Electronics Petition for Rulemaking to Eliminate the Personal Use Restriction on Wideband Consumer Signal Boosters, WT Docket No. 10-4, released March 3, 2017.

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The National Public Safety Telecommunications Council

The National Public Safety Telecommunications Council is a federation of public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. NPSTC pursues the role of resource and advocate for public safety organizations in the United States on matters relating to public safety telecommunications. NPSTC has promoted implementation of the Public Safety Wireless Advisory Committee (PSWAC) and the 700 MHz Public Safety National Coordination Committee (NCC) recommendations. NPSTC explores technologies and public policy involving public safety telecommunications, analyzes the ramifications of particular issues and submits comments to governmental bodies with the objective of furthering public safety telecommunications worldwide. NPSTC serves as a standing forum for the exchange of ideas and information for effective public safety telecommunications.

The following 16 organizations serve on NPSTC's Governing Board:

American Association of State Highway and Transportation Officials
American Radio Relay League
Association of Fish and Wildlife Agencies
Association of Public-Safety Communications Officials-International
Forestry Conservation Communications Association
International Association of Chiefs of Police
International Association of Emergency Managers
International Association of Fire Chiefs
International Municipal Signal Association
National Association of State Chief Information Officers
National Association of State Emergency Medical Services Officials
National Association of State Foresters
National Association of State Technology Directors
National Council of Statewide Interoperability Coordinators
National Emergency Number Association
National Sheriffs' Association

Several federal agencies are liaison members of NPSTC. These include the Department of

Homeland Security (the Federal Emergency Management Agency, the Office of Emergency Communications, the Office for Interoperability and Compatibility, and the SAFECOM Program); Department of Commerce (National Telecommunications and Information Administration); Department of the Interior; and the Department of Justice (National Institute of Justice, Communications Technology Program). Also, Public Safety Europe is a liaison member. NPSTC has relationships with associate members: The Canadian Interoperability Technology Interest Group (CITIG) and the Utilities Technology Council (UTC), and affiliate members: The Alliance for Telecommunications Industry Solutions (ATIS), Open Mobile Alliance (OMA), Telecommunications Industry Association (TIA), TETRA Critical Communications Association (TCCA), and Project 25 Technology Interest Group (PTIG).

NPSTC Supports the Wilson Electronics Petition

Wilson Electronics (Wilson) submitted a Petition for Rulemaking that seeks to eliminate the "personal use" restriction specified in rules applicable to commercial wireless systems. As currently written, Section 20.21(a) states that:

> [a] subscriber in good standing of a commercial mobile radio service system may operate a Consumer Signal Booster for personal use under the authorization held by the licensee providing service to the subscriber provided that the subscriber complies with [the Commission's rules][2]

Section 20.21(g) states that:

> Consumer Signal Boosters may only be sold to members of the general public for their personal use.[3]

[2] 47 CFR Section 20.21(a)
[3] 47 CFR Section 20.21(g)

In its petition, Wilson points out that there are two types of consumer signal boosters provided for under the Commission's rules, one that is "provider-specific" and another that is known as a "wideband" consumer booster. The wideband booster is designed so a wireless subscriber has the capability to boost a weak signal, regardless of the carrier it uses. The Commission has an open rulemaking which has already proposed to eliminate the personal use restriction for provider-specific consumer signal boosters, but not for wideband consumer boosters.[4] In its petition, Wilson points to numerous comments from wireless carriers and enterprise entities already submitted in that rulemaking that support the Commission's proposal to eliminate the personal use restrictions for provider-specific boosters. The Wilson Petition for Rulemaking seeks the same relief for wideband consumer signal boosters. Wilson also asserts the personal use restrictions cause confusion; given other sections of the rules clearly envision that signal booster use by subscribers other than individuals.

Wilson's petition applies to consumer boosters, not boosters on public safety frequencies. However, NPSTC believes public safety entities, as well as business entities that use CMRS systems to contact public safety, will benefit from the requested rule change.

Even with advances in commercial wireless system buildout, there are still a number of locations throughout the country where subscribers experience wireless signals that are weaker than desired. For example, weak signals can occur in rural areas where the low number of subscribers may not economically support strong coverage. Also, businesses or even governmental entities that occupy space in buildings constructed with energy-efficient glass may experience weaker signals as those building materials can retard the passage of radio

[4] Further Notice of Proposed Rulemaking, WT Docket 10-4, released September 23, 2014.

frequency signals. Consumer signal boosters can provide subscribers a cost-effective means to help resolve these coverage issues.

From a NPSTC perspective, whether a commercial subscriber is using a consumer signal booster for personal use, business use or official government use should be irrelevant. All of these uses are bona-fide operations for which an entity can subscribe to a commercial wireless service under the Commission's rules. Therefore, any of these uses may need to deploy consumer signal boosters in some locations to enhance wireless coverage.

Regardless of whether a consumer booster is used for personal, business or governmental use, technical rules must be in place to minimize and address any interference that might occur. In its initial Report and Order on consumer signal boosters, the Commission established rules that require consumer signal boosters to meet technical specifications known collectively as the Network Protection Standard (NPS). Also, consumers must register signal boosters with their provider prior to use.[5]

While the Network Protection Standards were implemented mostly to protect commercial wireless networks against harm, some of the same technical requirements involved help minimize the potential for interference to public safety networks. For example, interference from signal boosters historically occurred when a poorly designed or improperly installed booster would go into self-oscillation. As part of the Network Protection Standards, the Commission now requires that all consumer signal boosters be designed to detect and mitigate such oscillation. In addition, consumer signal boosters must be capable of monitoring the device's compliance with applicable noise and gain limits. If it is determined that the device is

[5] Report and Order, WT Docket No. 10-4, released February 20, 2013.

operating outside of these technical parameters, the device must be capable of self-correcting or shutting itself down automatically.

The initial Commission decision did result in some differences in the technical requirements for consumer wideband signal boosters vs. those classed as provider-specific consumer boosters. However, in response to petitions for reconsideration, in September 2014, the Commission subsequently conformed many of the technical requirements across both provider-specific consumer boosters and wideband consumer boosters.[6] The Wilson petition for rulemaking states that:

> The Network Protection Standards ("NPS") that the Commission adopted in 2014 for consumer boosters has eliminated the interference issues that had previously existed. None of the four nationwide service providers have reported that consumer boosters have had a significant negative impact on their networks. Since the NPS went into effect, Wilson has shipped more than 750,000 Commission-approved consumer boosters and received no reports that any of its boosters caused interference to a wireless network. In short, the NPS requirements have worked to protect network operations, and they will continue to do so after the personal-use restriction is totally eliminated.
>
> There is no cause to believe that NPS-compliant, Commission-approved wideband boosters will cause interference if they are used by business, governmental agencies, first responders, or other enterprises.[7]

To the extent the Commission confirms the above statement regarding lack of interference reports, NPSTC sees no reason to maintain the personal use restriction for wideband signal boosters. With adequate technical provisions in place, it should not matter whether a consumer signal booster is used for individual personal use, by a small business or by a governmental entity.[8]

[6] Order on Reconsideration, WT Docket No. 10-4, released September 23, 2014.
[7] Petition for Rulemaking, Summary at pages iv and v.
[8] NPSTC recommends the Commission review whether the current technical provisions are sufficient as commercial carriers advance their deployment of 4G LTE and plan for 5G as well.

Conclusion

NPSTC supports the petition for rulemaking submitted by Wilson Electronics recommending that the personal use restriction in Sections 20.21(a) and (g) of the rules be eliminated for all consumer signal boosters. In 2014, the Commission finalized technical Network Protection Standards for consumer signal boosters that appear to have helped minimize interference. To the extent the Commission's experience shows that interference from consumer signal boosters has in fact been significantly reduced, it should not matter whether a consumer signal booster is used to supplement weak signal areas of commercial wireless networks for individual personal use, by a small business or by a governmental entity. Any of these entities can have legitimate needs to enhance the CMRS coverage experienced in weak signal areas.

Ralph A. Haller, Chairman

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